FIG. 1

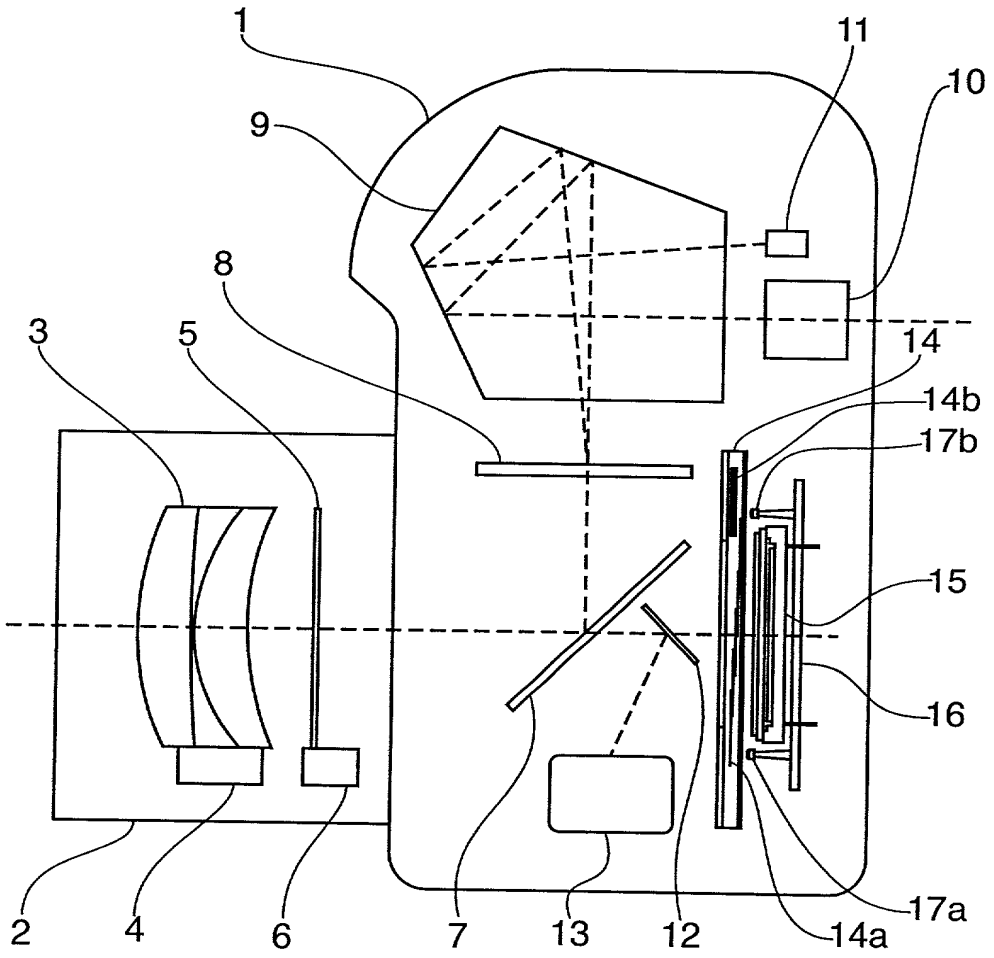

FIG. 2

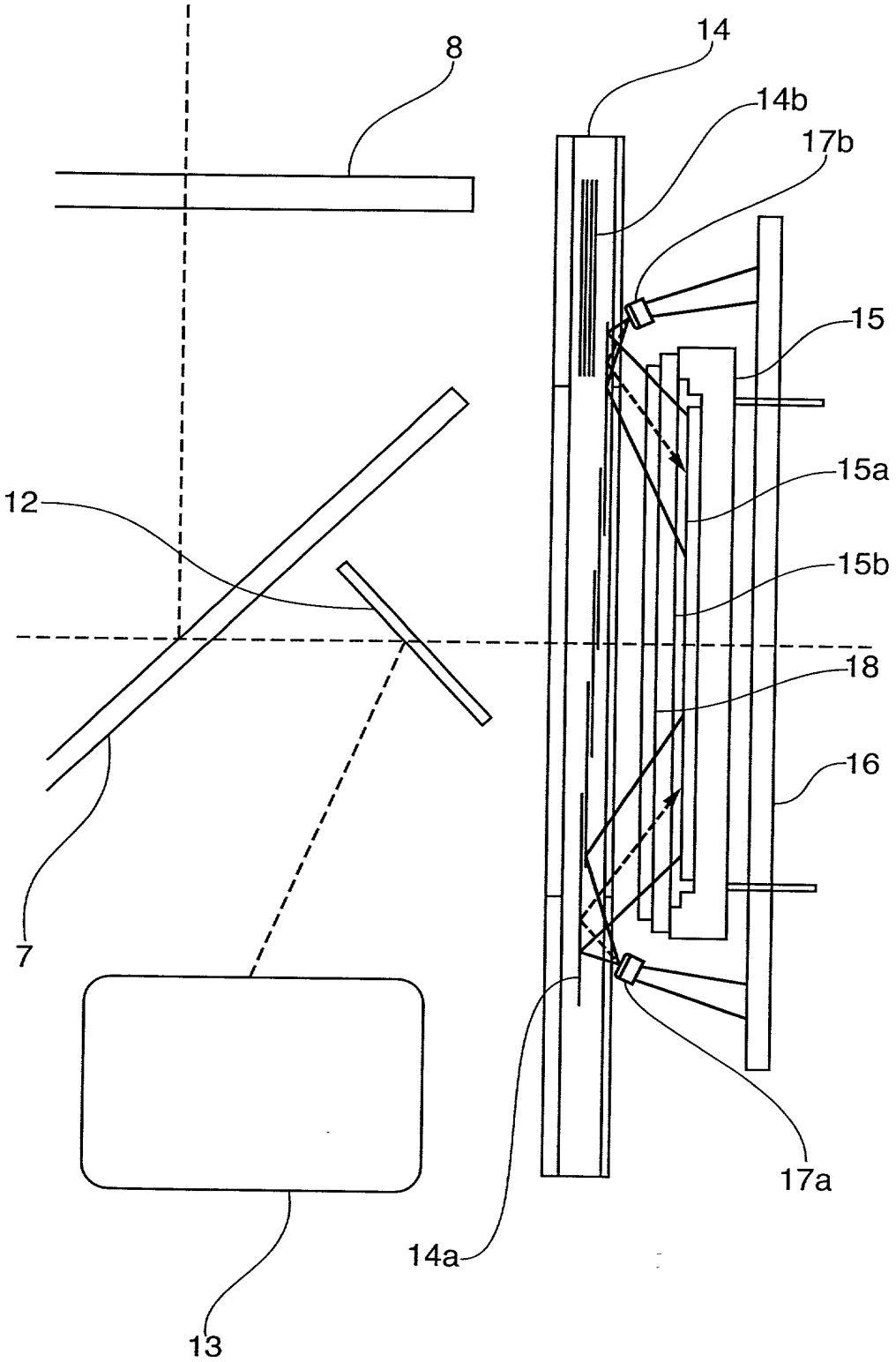

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FIG. 3

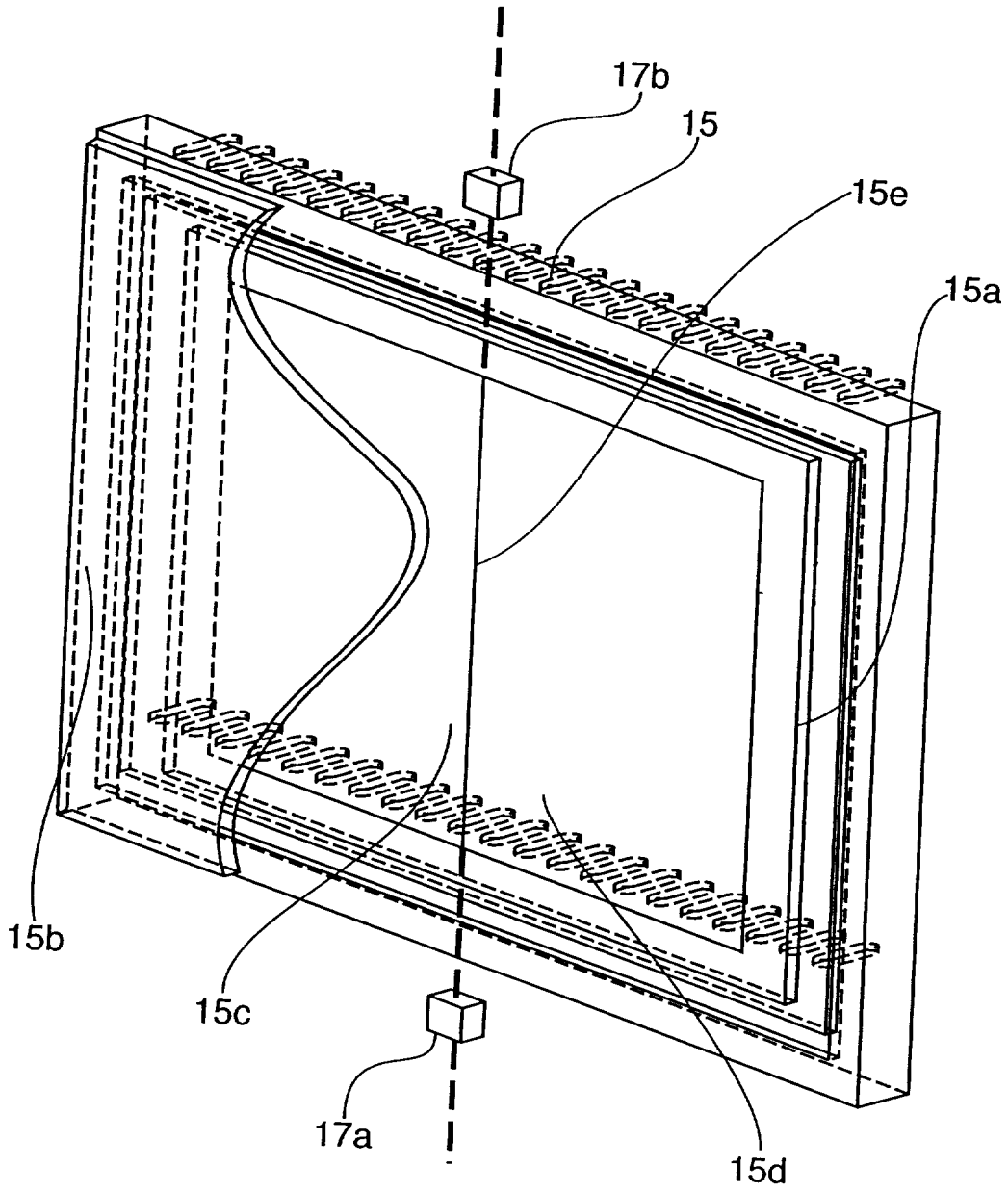

FIG. 4

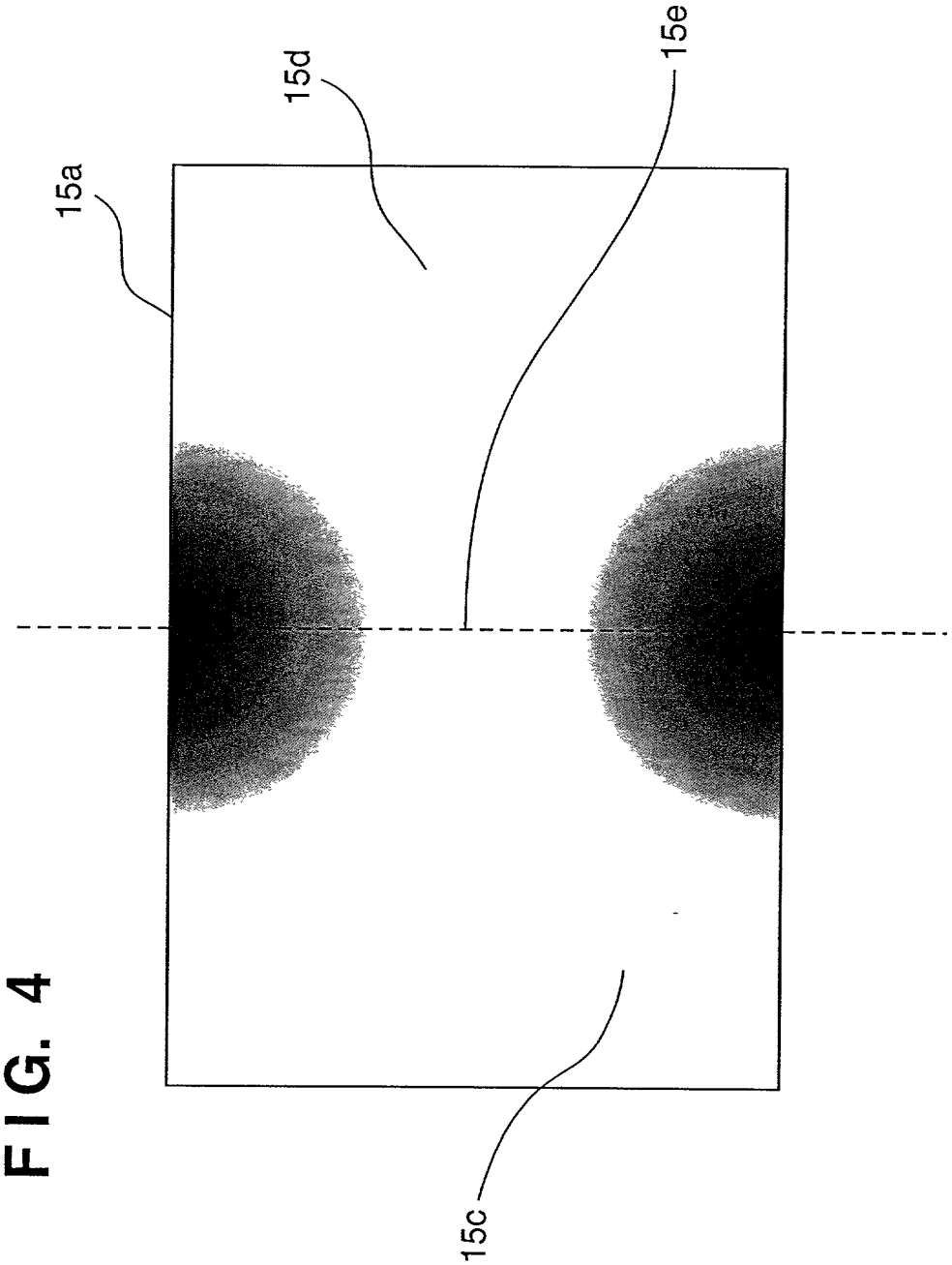

FIG. 5

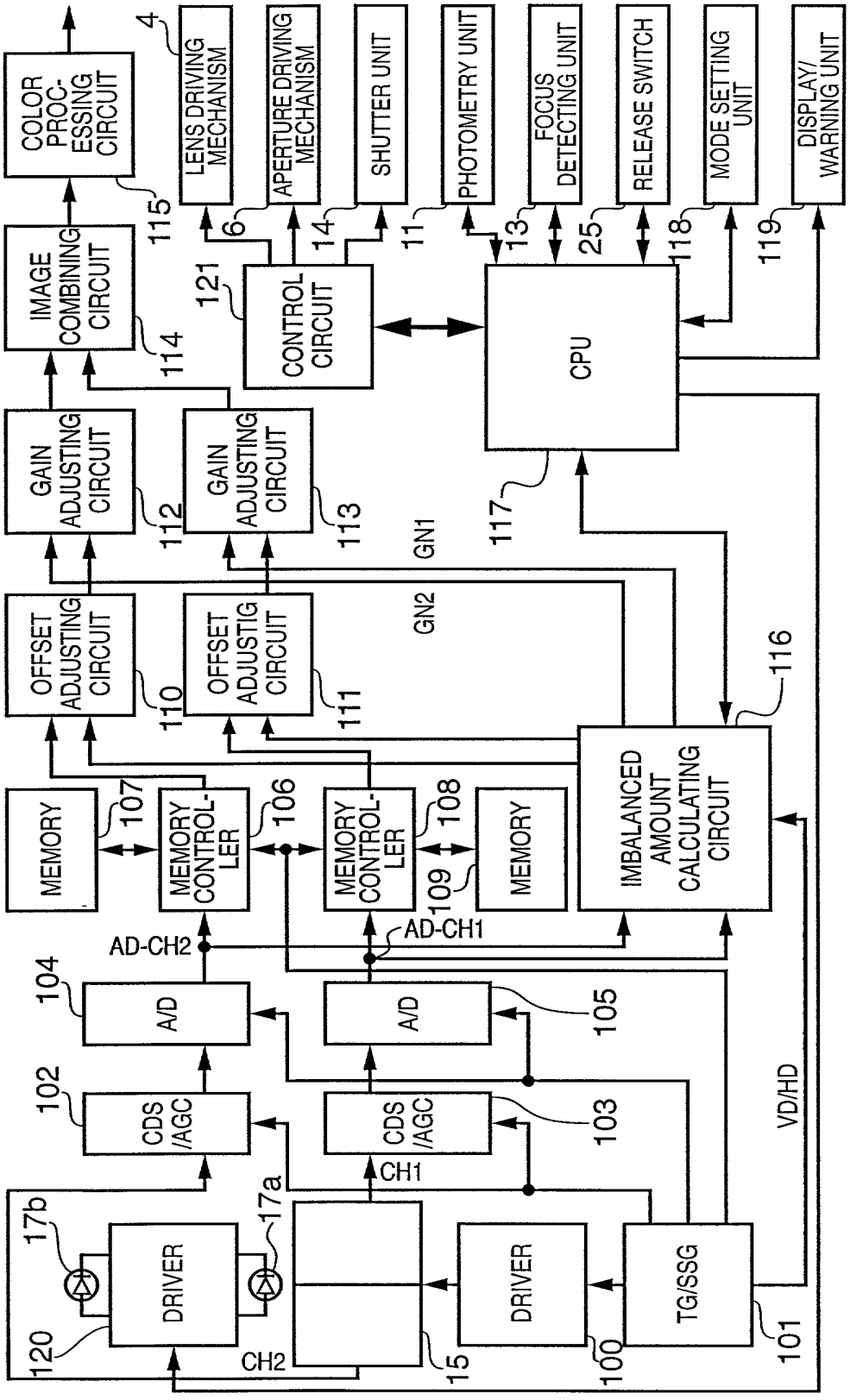
TG/SSG
DRIVER
DRIVER
CDS /AGC
CDS /AGC
A/D
A/D
MEMORY
MEMORY CONTROL-LER
MEMORY CONTROL-LER
MEMORY
IMBALANCED AMOUNT CALCULATING CIRCUIT
OFFSET ADJUSTING CIRCUIT
OFFSET ADJUSTIG CIRCUIT
GAIN ADJUSTING CIRCUIT
GAIN ADJUSTING CIRCUIT
IMAGE COMBINING CIRCUIT
COLOR PROC-ESSING CIRCUIT
CONTROL CIRCUIT
CPU
LENS DRIVING MECHANISM
APERTURE DRIVING MECHANISM
SHUTTER UNIT
PHOTOMETRY UNIT
FOCUS DETECTING UNIT
RELEASE SWITCH
MODE SETTING UNIT
DISPLAY/ WARNING UNIT
VD/HD
CH1
CH2
AD-CH1
AD-CH2
GN1
GN2
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
4
6
11
13
14
15
17a
17b
25

FIG. 6

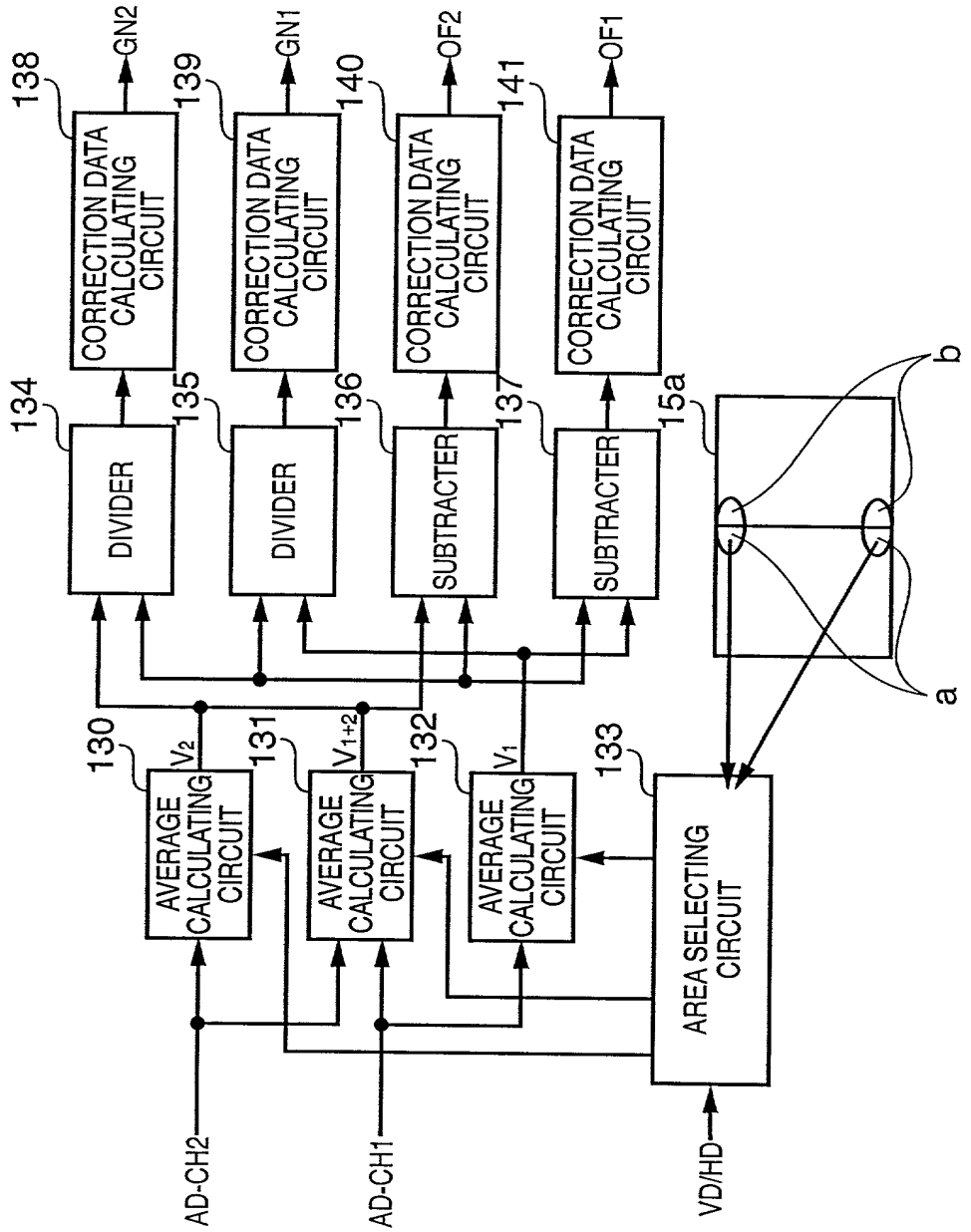
AD-CH2
AD-CH1
VD/HD
AVERAGE CALCULATING CIRCUIT
AVERAGE CALCULATING CIRCUIT
AVERAGE CALCULATING CIRCUIT
AREA SELECTING CIRCUIT
DIVIDER
DIVIDER
SUBTRACTER
SUBTRACTER
CORRECTION DATA CALCULATING CIRCUIT
CORRECTION DATA CALCULATING CIRCUIT
CORRECTION DATA CALCULATING CIRCUIT
CORRECTION DATA CALCULATING CIRCUIT
130
131
132
133
134
135
136
137
138
139
140
141
15a
GN2
GN1
OF2
OF1
a
b

FIG. 7

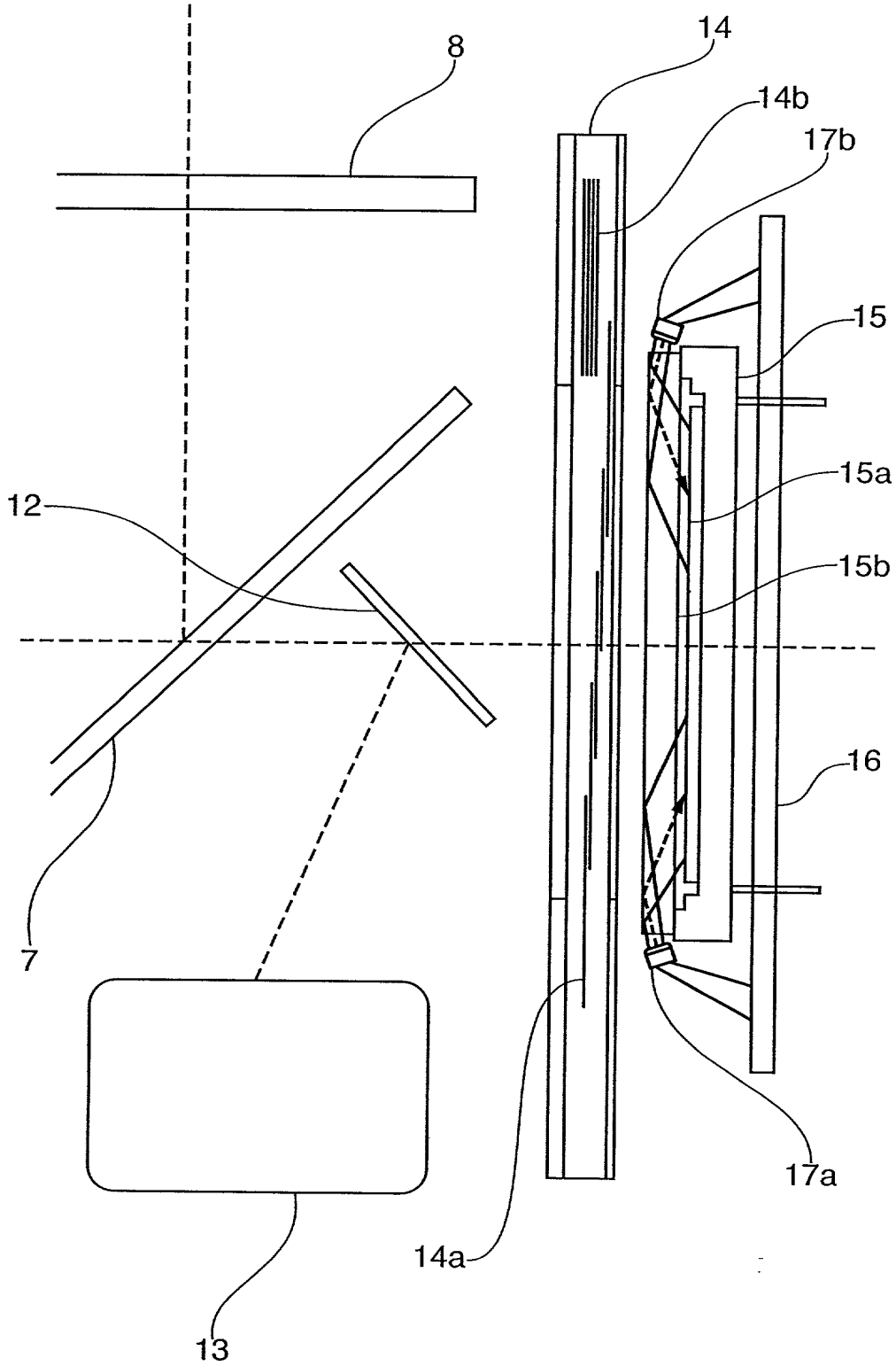

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FIG. 8

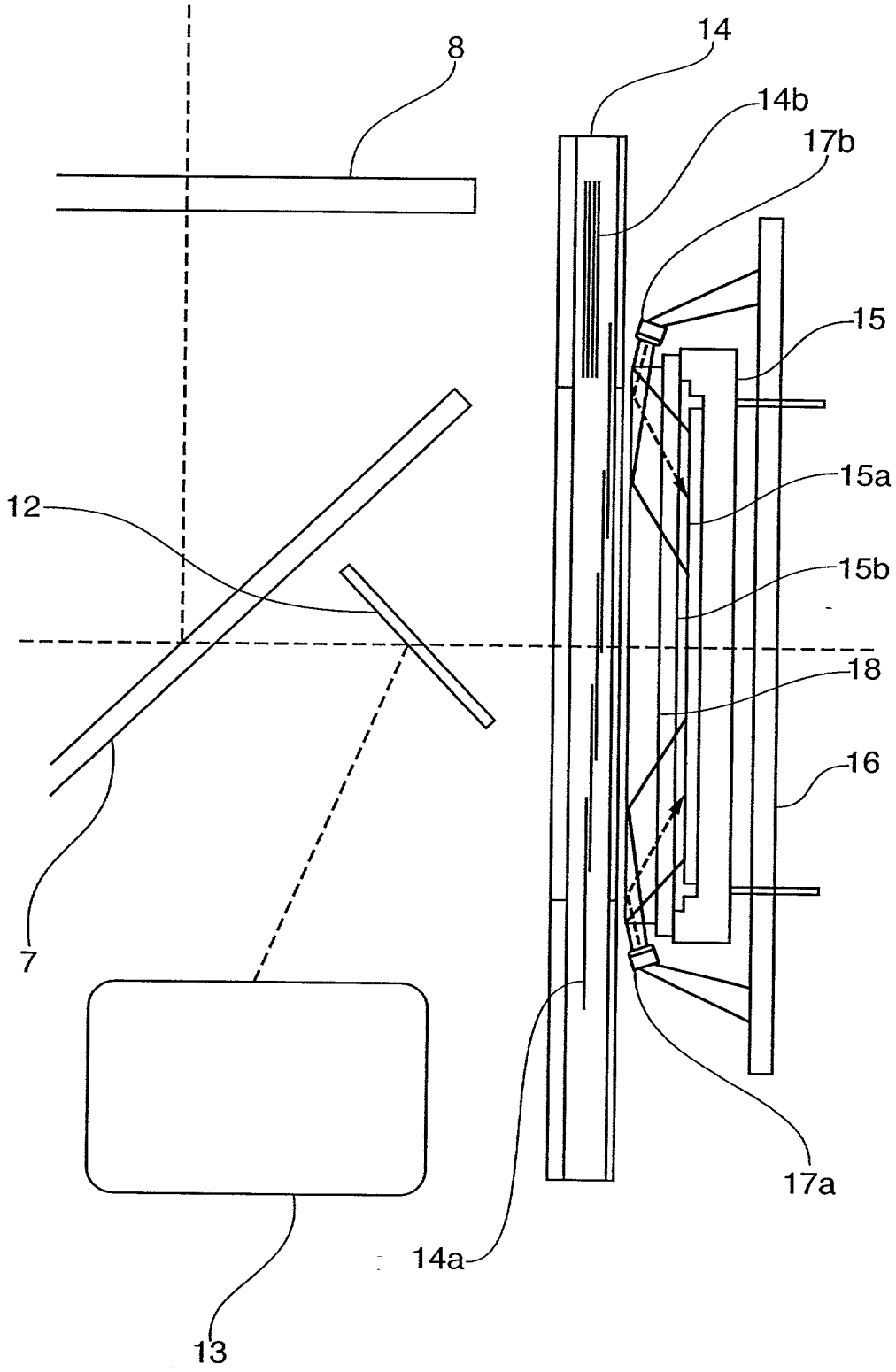
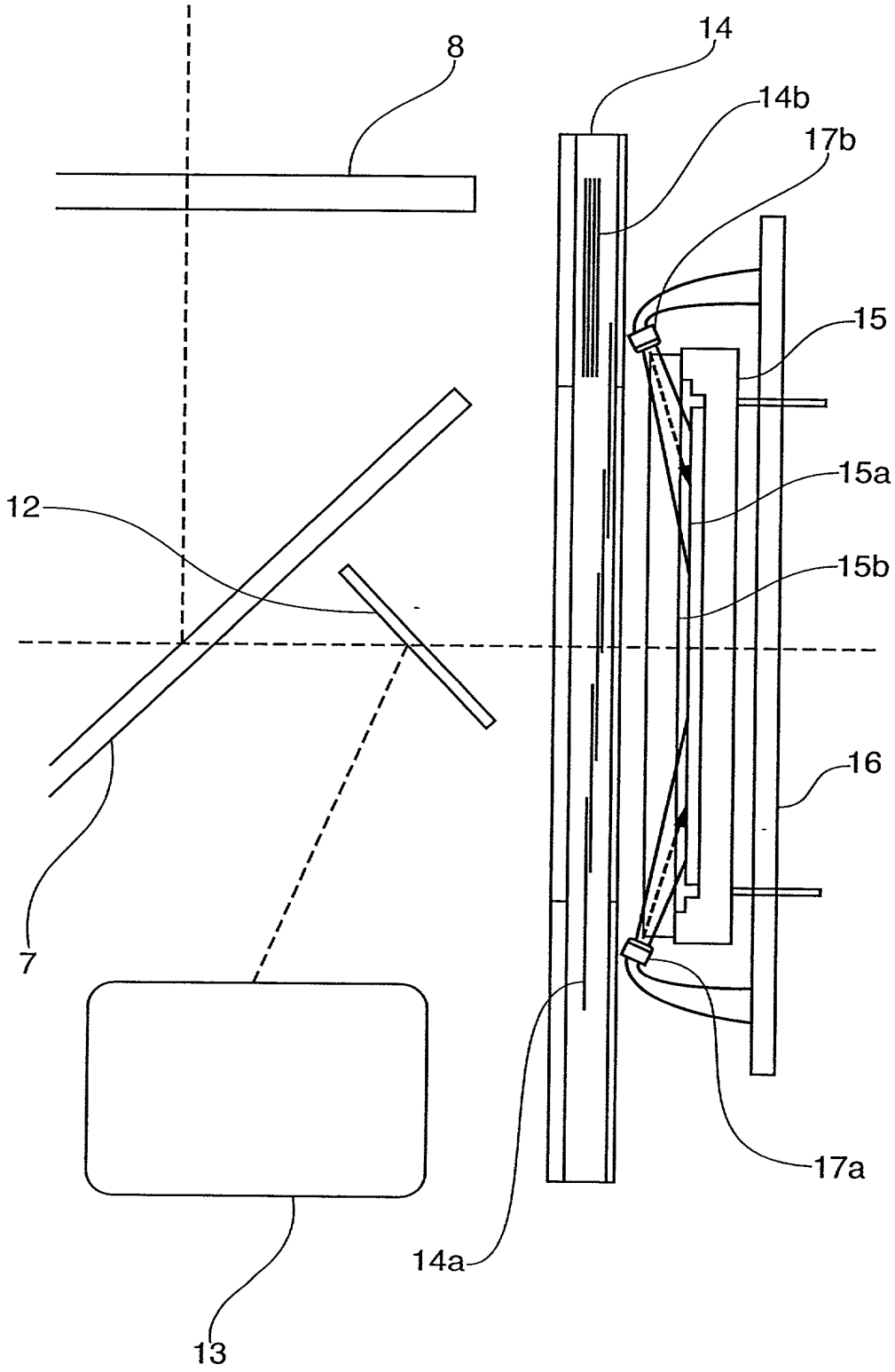


FIG. 9



FOREIGN-2005245650

FIG. 10

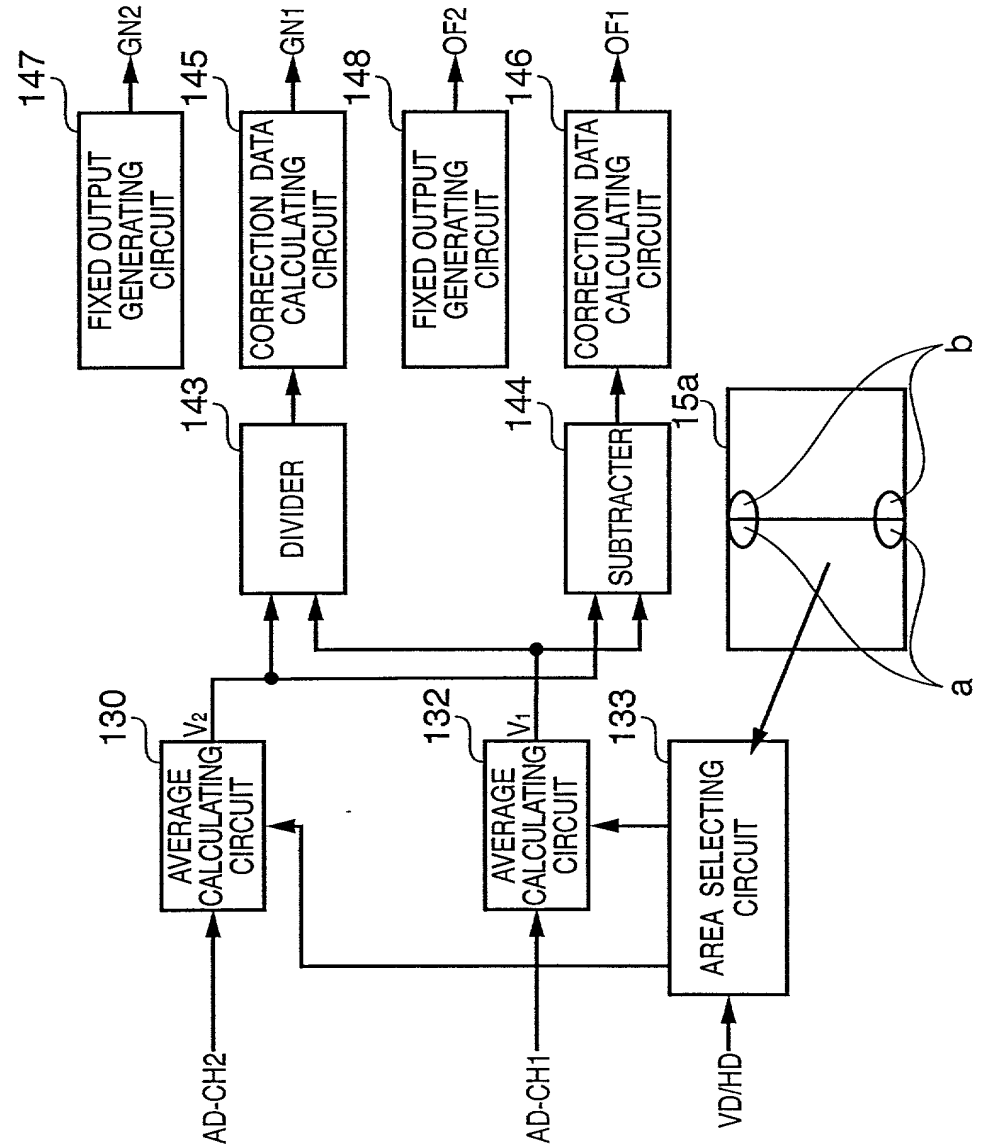

AD-CH2
AD-CH1
VD/HD
AVERAGE CALCULATING CIRCUIT
AVERAGE CALCULATING CIRCUIT
AREA SELECTING CIRCUIT
DIVIDER
SUBTRACTER
FIXED OUTPUT GENERATING CIRCUIT
CORRECTION DATA CALCULATING CIRCUIT
FIXED OUTPUT GENERATING CIRCUIT
CORRECTION DATA CALCULATING CIRCUIT
130
132
133
143
144
15a
145
146
147
148
GN1
GN2
OF1
OF2
a
b

FIG. 11

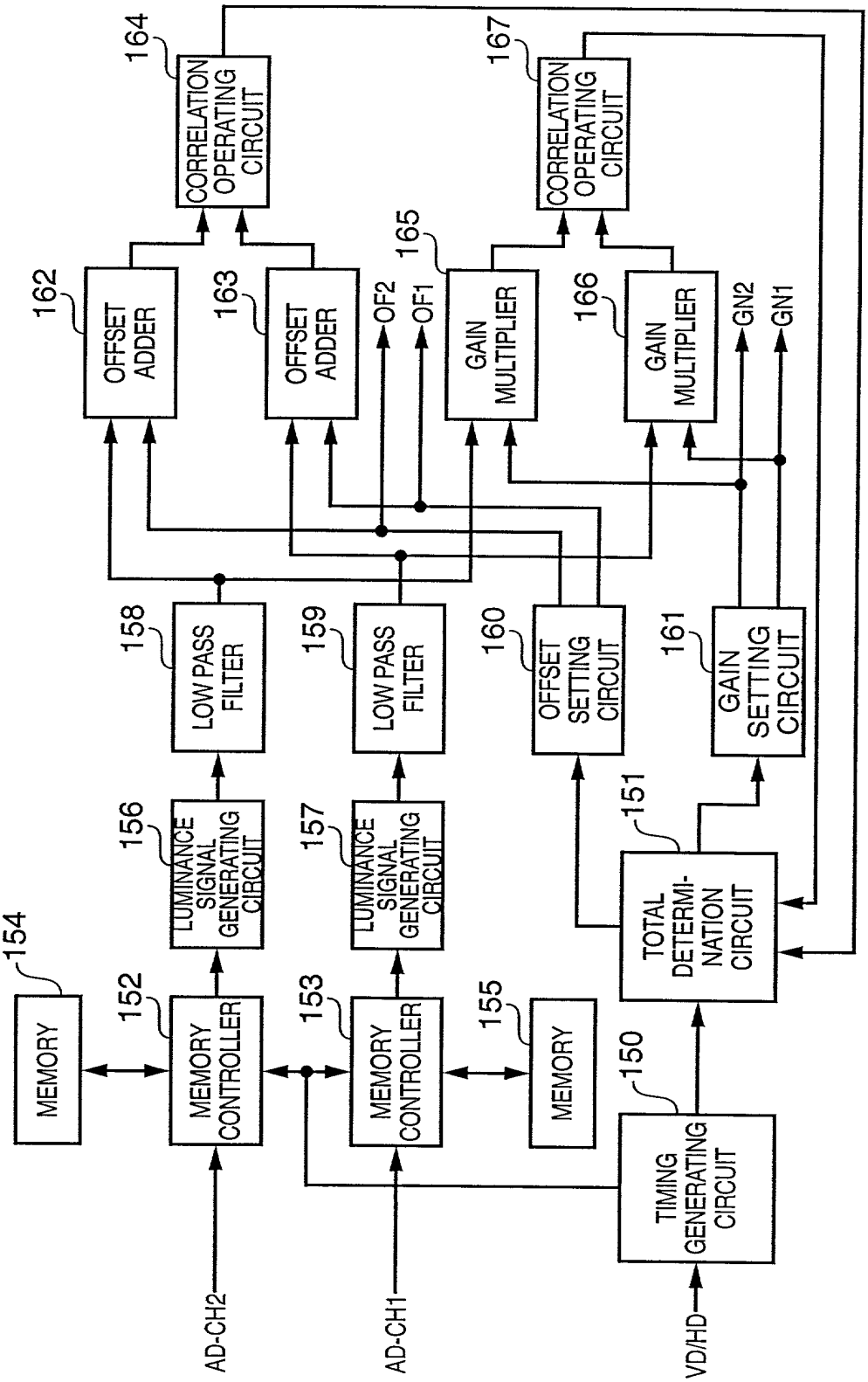

MEMORY
MEMORY CONTROLLER
MEMORY CONTROLLER
MEMORY
LUMINANCE SIGNAL GENERATING CIRCUIT
LUMINANCE SIGNAL GENERATING CIRCUIT
LOW PASS FILTER
LOW PASS FILTER
OFFSET SETTING CIRCUIT
GAIN SETTING CIRCUIT
TOTAL DETERMI-NATION CIRCUIT
TIMING GENERATING CIRCUIT
OFFSET ADDER
OFFSET ADDER
GAIN MULTIPLIER
GAIN MULTIPLIER
CORRELATION OPERATING CIRCUIT
CORRELATION OPERATING CIRCUIT
OF2
OF1
GN2
GN1
AD-CH2
AD-CH1
VD/HD
154
152
153
155
156
157
158
159
160
161
151
150
162
163
165
166
164
167

FIG. 12A

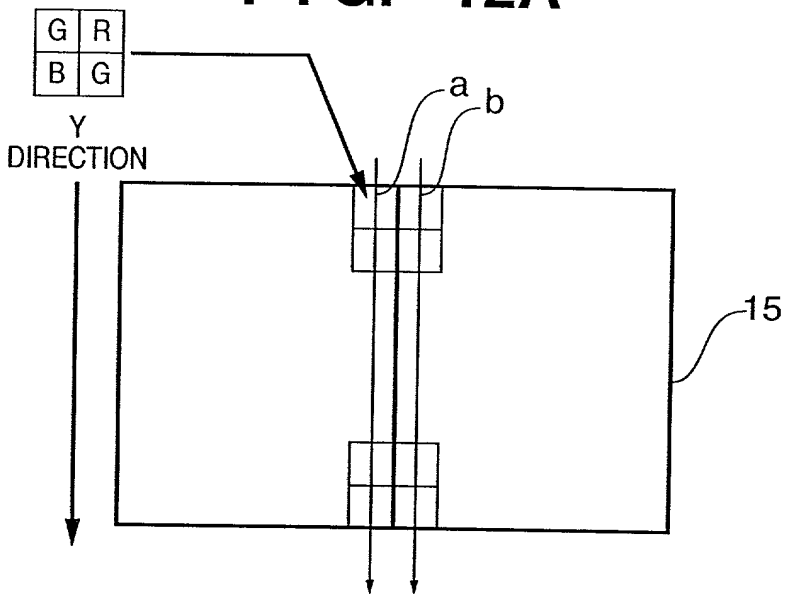
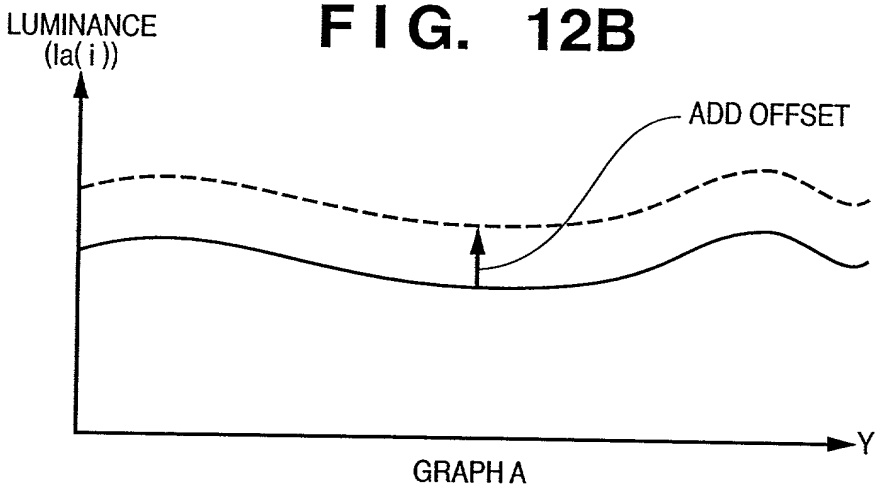
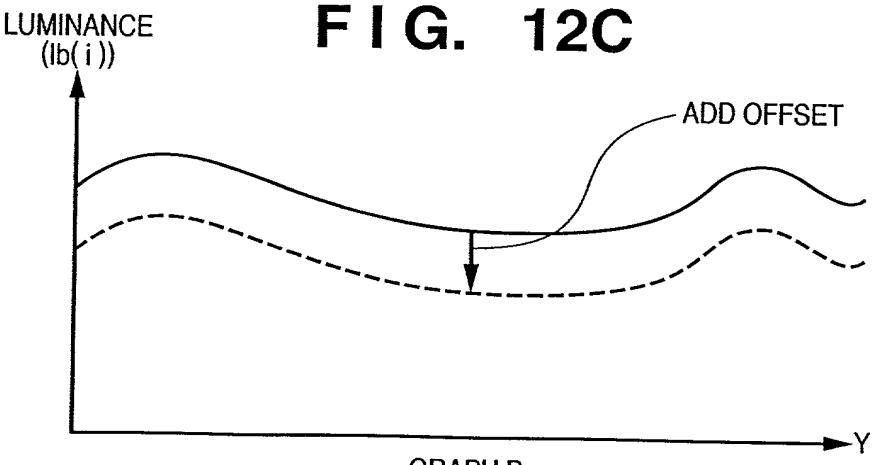


FIG. 12B



GRAPH A

FIG. 12C



GRAPH B

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FIG. 13A

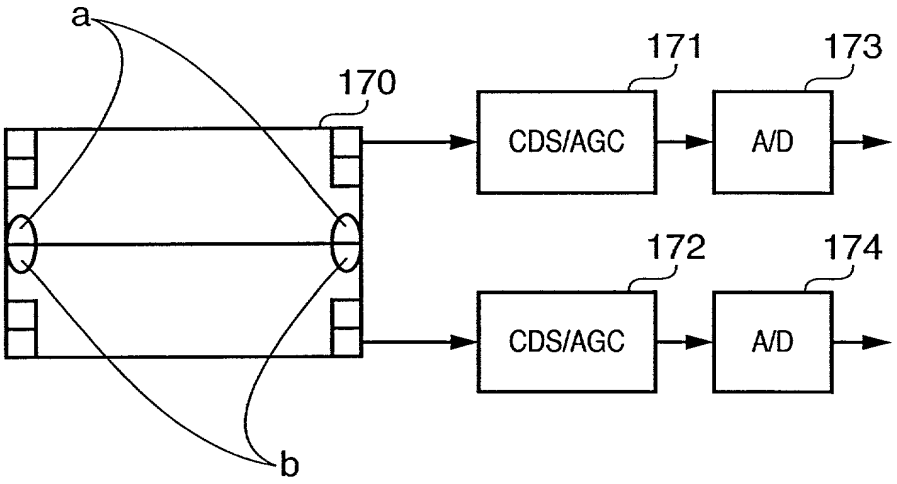


FIG. 13B

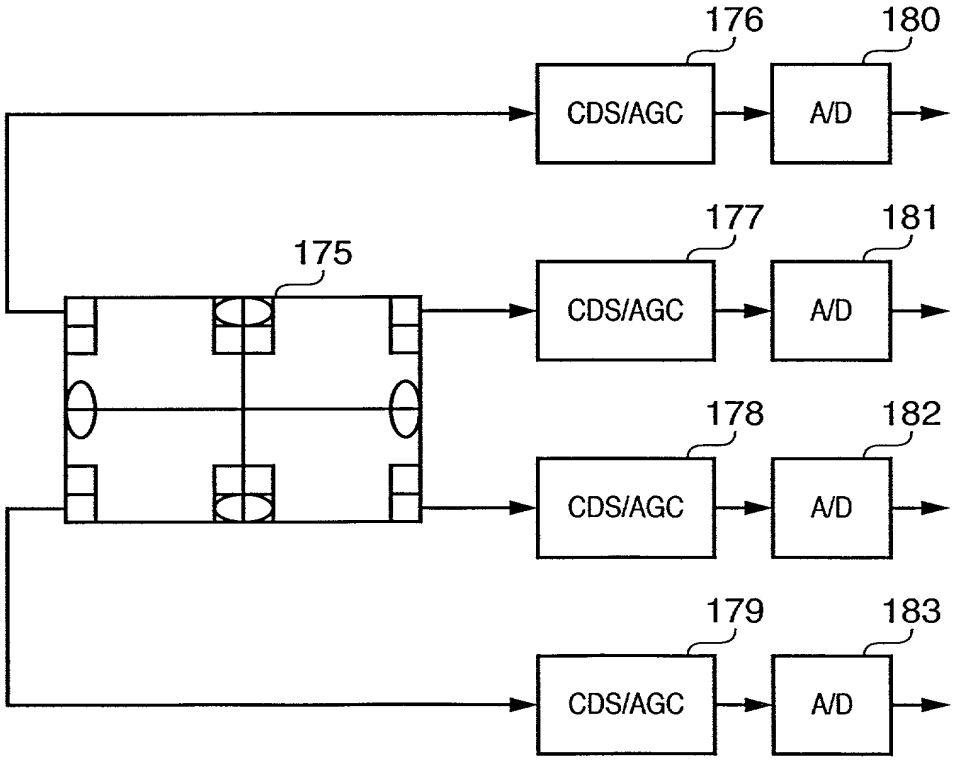


FIG. 14

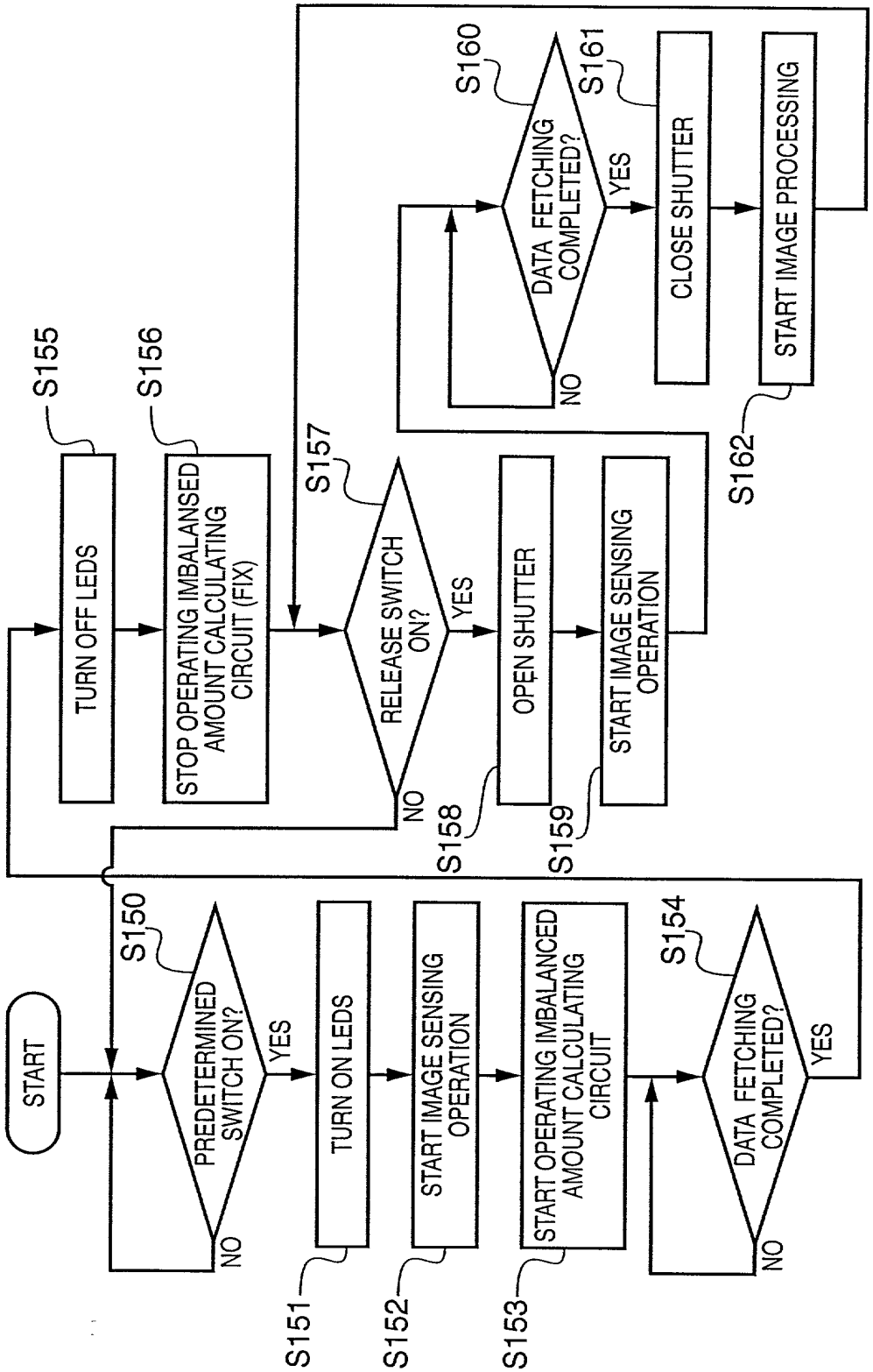

START
S150
PREDETERMINED SWITCH ON?
YES
NO
S151
TURN ON LEDS
S152
START IMAGE SENSING OPERATION
S153
START OPERATING IMBALANCED AMOUNT CALCULATING CIRCUIT
S154
DATA FETCHING COMPLETED?
YES
NO
S155
TURN OFF LEDS
S156
STOP OPERATING IMBALANSED AMOUNT CALCULATING CIRCUIT (FIX)
S157
RELEASE SWITCH ON?
YES
NO
S158
OPEN SHUTTER
S159
START IMAGE SENSING OPERATION
S160
DATA FETCHING COMPLETED?
YES
NO
S161
CLOSE SHUTTER
S162
START IMAGE PROCESSING

FIG. 15

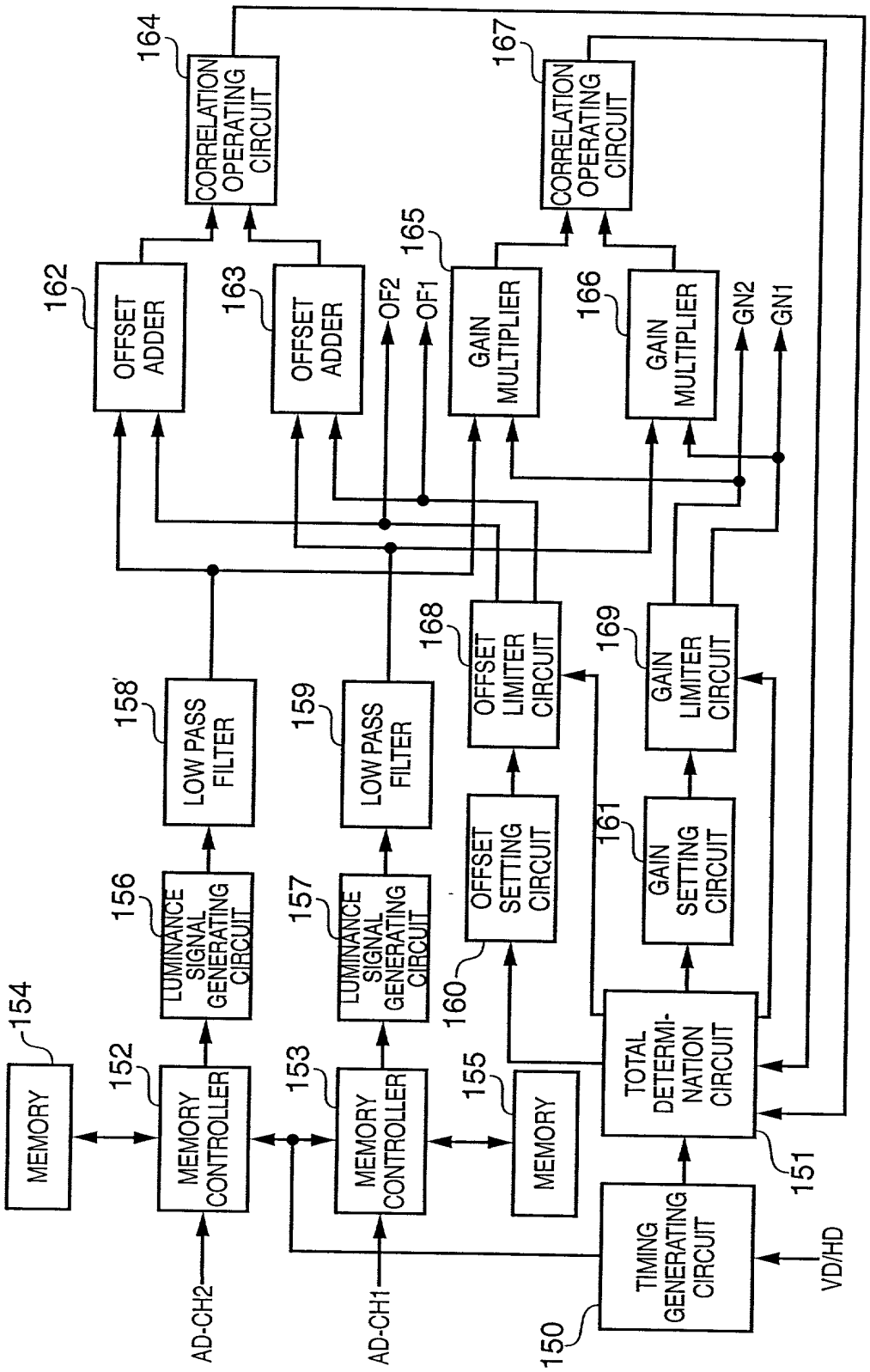

MEMORY
154
MEMORY CONTROLLER
152
LUMINANCE SIGNAL GENERATING CIRCUIT
156
LOW PASS FILTER
158'
AD-CH2
MEMORY CONTROLLER
153
LUMINANCE SIGNAL GENERATING CIRCUIT
157
LOW PASS FILTER
159
AD-CH1
MEMORY
155
OFFSET SETTING CIRCUIT
160
GAIN SETTING CIRCUIT
161
TOTAL DETERMI-NATION CIRCUIT
151
TIMING GENERATING CIRCUIT
150
VD/HD
OFFSET ADDER
162
OFFSET ADDER
163
CORRELATION OPERATING CIRCUIT
164
OF2
OF1
GAIN MULTIPLIER
165
GAIN MULTIPLIER
166
CORRELATION OPERATING CIRCUIT
167
GN2
GN1
OFFSET LIMITER CIRCUIT
168
GAIN LIMITER CIRCUIT
169

FIG. 16

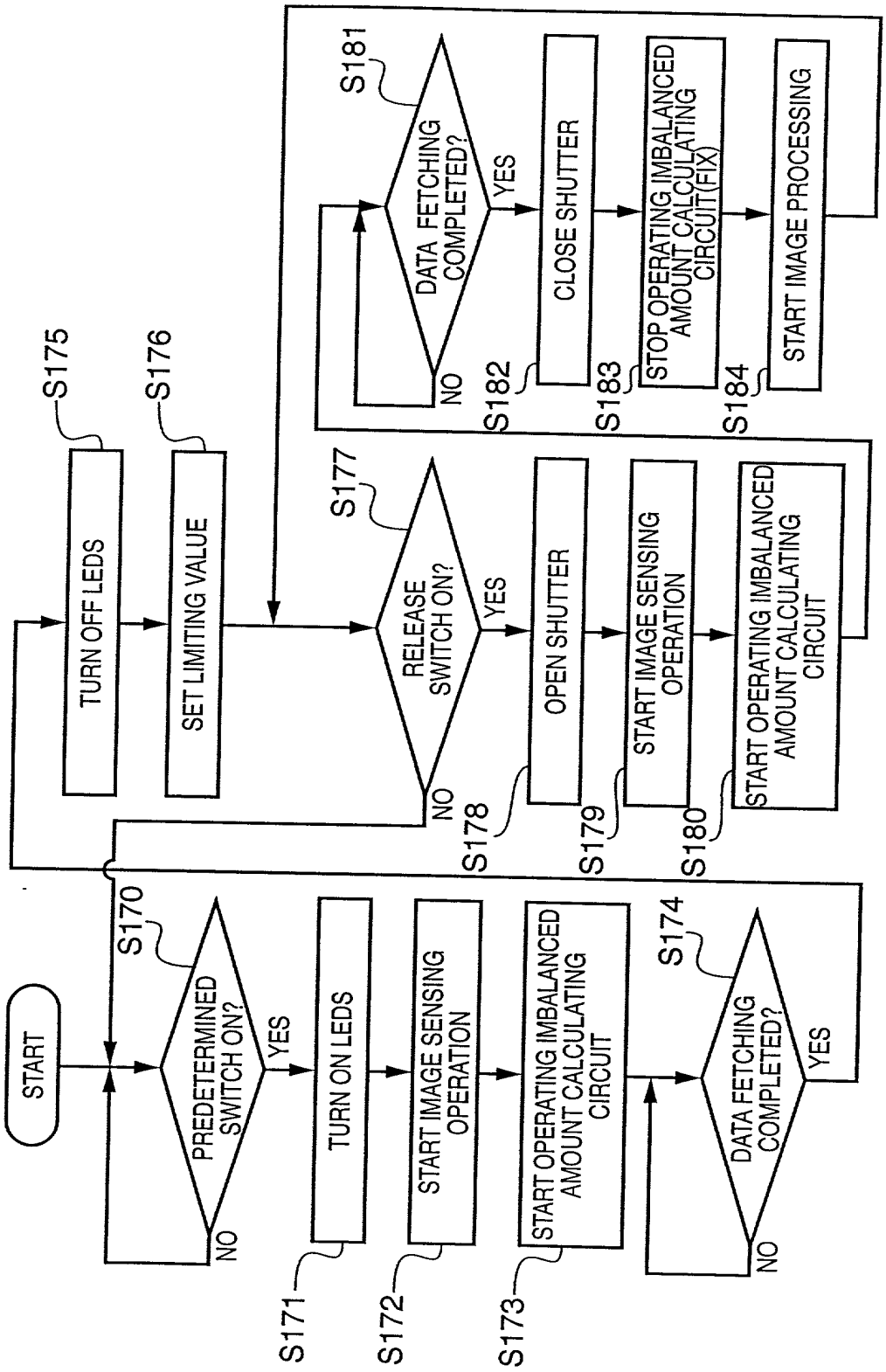

START
PREDETERMINED SWITCH ON?
YES
NO
TURN ON LEDS
START IMAGE SENSING OPERATION
START OPERATING IMBALANCED AMOUNT CALCULATING CIRCUIT
DATA FETCHING COMPLETED?
YES
NO
TURN OFF LEDS
SET LIMITING VALUE
RELEASE SWITCH ON?
YES
NO
OPEN SHUTTER
START IMAGE SENSING OPERATION
START OPERATING IMBALANCED AMOUNT CALCULATING CIRCUIT
DATA FETCHING COMPLETED?
YES
NO
CLOSE SHUTTER
STOP OPERATING IMBALANCED AMOUNT CALCULATING CIRCUIT(FIX)
START IMAGE PROCESSING
S170
S171
S172
S173
S174
S175
S176
S177
S178
S179
S180
S181
S182
S183
S184

FIG. 17

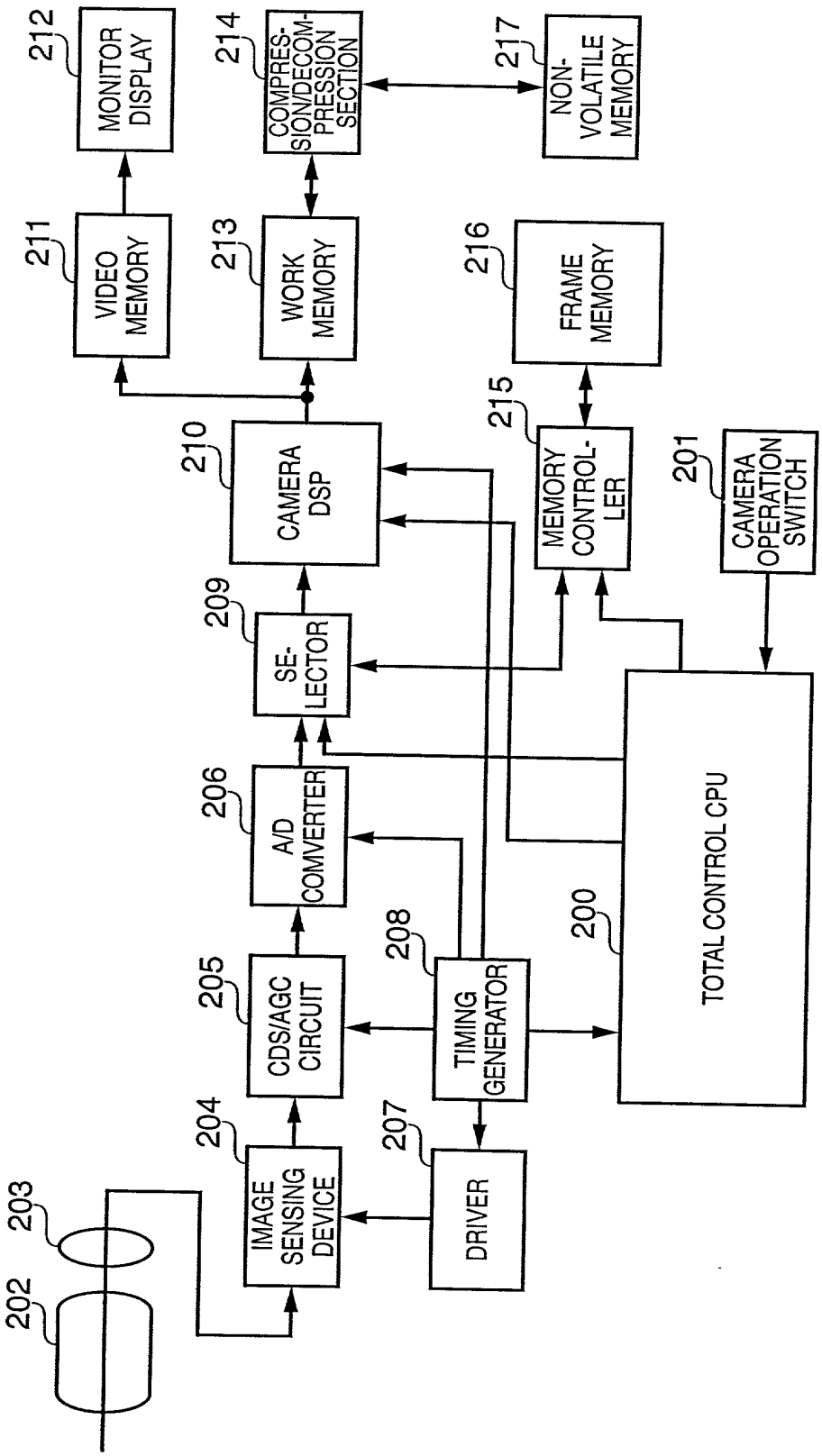
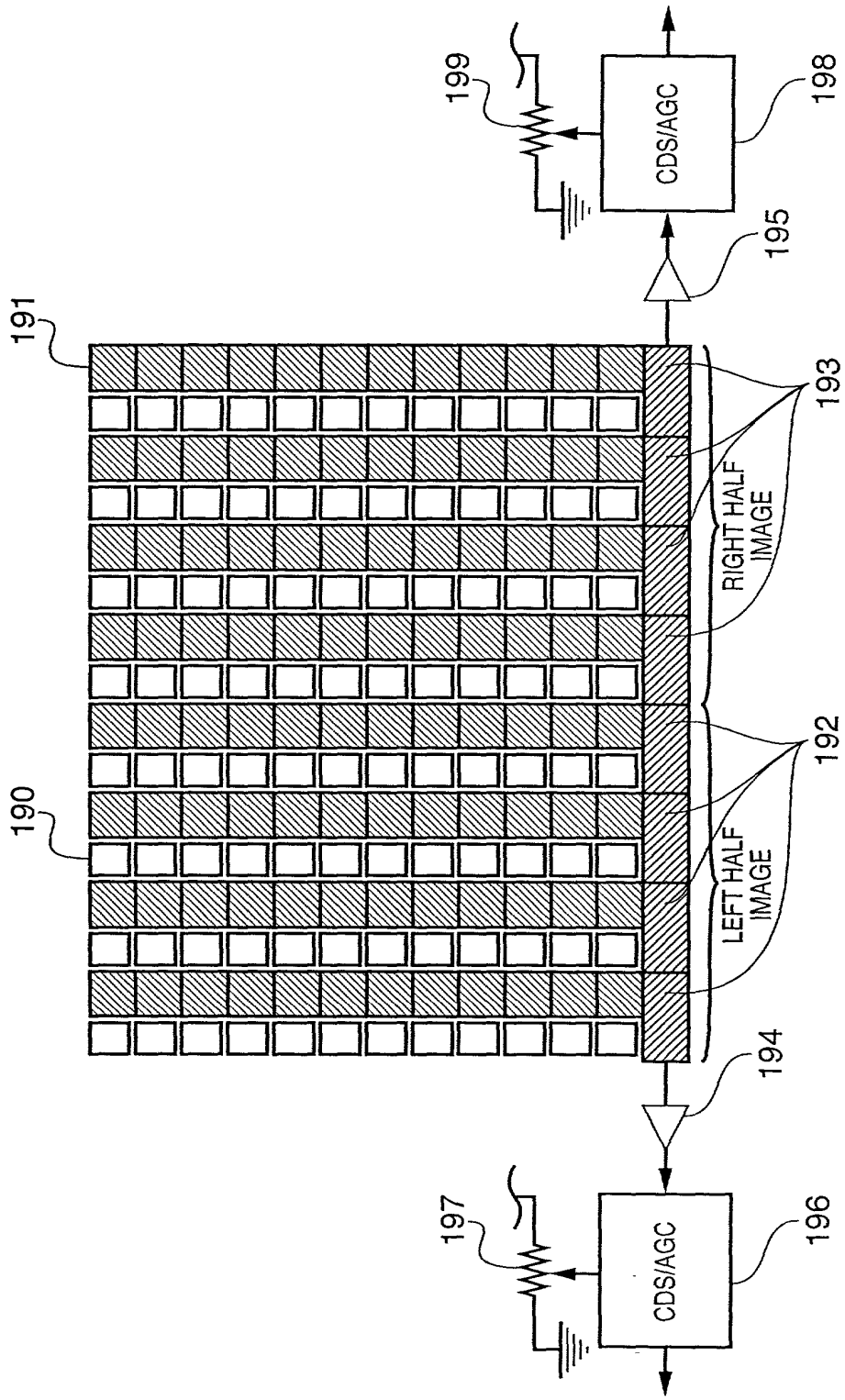

202
203
IMAGE SENSING DEVICE
204
CDS/AGC CIRCUIT
205
A/D COMVERTER
206
SE-LECTOR
209
CAMERA DSP
210
VIDEO MEMORY
211
MONITOR DISPLAY
212
WORK MEMORY
213
COMPRES-SION/DECOM-PRESSION SECTION
214
MEMORY CONTROL-LER
215
FRAME MEMORY
216
NON-VOLATILE MEMORY
217
CAMERA OPERATION SWITCH
201
TOTAL CONTROL CPU
200
TIMING GENERATOR
208
DRIVER
207

FIG. 18


190
191
192
193
194
195
196
197
198
199
CDS/AGC
CDS/AGC
LEFT HALF IMAGE
RIGHT HALF IMAGE